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RSMC / TROPICAL CYCLONE CENTER / LA REUNION
TROPICAL CYCLONE FORECAST WARNING (SOUTH-WEST INDIAN OCEAN)

0.A WARNING NUMBER: 8/6/20222023
1.A SEVERE TROPICAL STORM 6 (DINGANI)

2.A POSITION 2023/02/11 AT 0000 UTC:
WITHIN 20 NM RADIUS OF POINT 15.5 S / 80.7 E
(FIFTEEN DECIMAL FIVE DEGREES SOUTH AND
EIGHTY DECIMAL SEVEN DEGREES EAST)
MOVEMENT: WEST 11 KT

3.A DVORAK ANALYSIS: 3.5/3.5/D 0.5/6 H

4.A CENTRAL PRESSURE: 990 HPA
5.A MAX AVERAGE WIND SPEED (10 MN): 50 KT
RADIUS OF MAXIMUM WINDS (RMW): 37 KM

6.A EXTENSION OF WIND BY QUADRANTS (KM):
28 KT NE: 85 SE: 140 SW: 130 NW: 95
34 KT NE: 45 SE: 100 SW: 95 NW: 55
48 KT NE: 0 SE: 0 SW: 40 NW: 0

7.A FIRST CLOSED ISOBAR (PRESSURE / AVERAGE DIAM): 1007 HPA / 500 KM
8.A VERTICAL EXTENSION OF CYCLONE CIRCULATION: DEEP

1.B FORECASTS (WINDS RADII IN KM):
12H: 2023/02/11 12 UTC: 15.7 S / 78.3 E, VENT MAX= 055 KT, SEVERE TROPICAL STORM
28 KT NE: 100 SE: 185 SW: 165 NW: 100
34 KT NE: 75 SE: 100 SW: 110 NW: 65
48 KT NE: 0 SE: 45 SW: 65 NW: 45

24H: 2023/02/12 00 UTC: 16.4 S / 76.4 E, VENT MAX= 060 KT, SEVERE TROPICAL STORM
28 KT NE: 120 SE: 185 SW: 150 NW: 110
34 KT NE: 85 SE: 100 SW: 110 NW: 75
48 KT NE: 35 SE: 55 SW: 65 NW: 45

36H: 2023/02/12 12 UTC: 17.5 S / 75.0 E, VENT MAX= 065 KT, TROPICAL CYCLONE
28 KT NE: 130 SE: 195 SW: 155 NW: 120
34 KT NE: 85 SE: 110 SW: 110 NW: 95
48 KT NE: 55 SE: 65 SW: 75 NW: 65
64 KT NE: 35 SE: 35 SW: 35 NW: 35

48H: 2023/02/13 00 UTC: 18.5 S / 74.1 E, VENT MAX= 065 KT, TROPICAL CYCLONE
28 KT NE: 150 SE: 215 SW: 165 NW: 120
34 KT NE: 95 SE: 130 SW: 120 NW: 95

48 KT NE: 55 SE: 65 SW: 75 NW: 65
64 KT NE: 35 SE: 35 SW: 35 NW: 35

60H: 2023/02/13 12 UTC: 19.6 S / 73.4 E, VENT MAX= 055 KT, SEVERE TROPICAL STORM
28 KT NE: 155 SE: 250 SW: 185 NW: 120
34 KT NE: 95 SE: 155 SW: 130 NW: 95
48 KT NE: 45 SE: 55 SW: 75 NW: 65

72H: 2023/02/14 00 UTC: 20.4 S / 72.7 E, VENT MAX= 045 KT, MODERATE TROPICAL STORM
28 KT NE: 140 SE: 295 SW: 230 NW: 100
34 KT NE: 85 SE: 185 SW: 150 NW: 75

2.B LONGER-RANGE OUTLOOK:
96H: 2023/02/15 00 UTC: 22.4 S / 69.3 E, VENT MAX= 035 KT, REMNANT LOW
28 KT NE: 150 SE: 240 SW: 150 NW: 85
34 KT NE: 0 SE: 155 SW: 0 NW: 0

120H: 2023/02/16 00 UTC: 24.8 S / 65.7 E, VENT MAX= 035 KT, REMNANT LOW
28 KT NE: 120 SE: 155 SW: 120 NW: 0
34 KT NE: 0 SE: 110 SW: 0 NW: 0

2.C ADDITIONAL INFORMATION:
T=CI=3.5

DINGANI HAS CONTINUED TO SHOW SIGNS OF INTENSIFICATION OVERNIGHT WITH DEEP CONVECTION ASSOCIATED WITH VERY COLD TOPS BEING MAINTAINED NEAR THE CENTER AND A MARKEDLY IMPROVED UPPER LEVEL DIVERGENCE IN THE NORTHERN SEMICIRCLE. THE INTENSITY IS NOW ESTIMATED AT 50 KT AT THE UPPER END OF ALL AVAILABLE OBJECTIVE AND SUBJECTIVE ESTIMATES.

LITTLE CHANGE IN THE TRACK FORECAST PHILOSOPHY COMPARED TO THE PREVIOUS FORECAST: UNTIL SATURDAY, THE SYSTEM IS HEADING IN A GENERAL WESTERLY DIRECTION, ALONG THE NORTHERN EDGE OF THE SUBTROPICAL RIDGE. FROM SUNDAY, WITH THE RETREAT OF THE SUBTROPICAL RIDGE EASTWARD, DINGANI'S TRACK SHOULD BECOME MORE POLEWARDS. AT THE BEGINNING OF NEXT WEEK, THE WEAKENING OF THE SYSTEM IS ACCOMPANIED BY THE LOWERING OF THE LEVEL OF THE STEERING FLOW. HOWEVER, THE LOW LEVELS SUBTROPICAL RIDGE SHOULD NOT BE VERY STRONG AND ALL RELIABLE DETERMINISTIC MODELS STILL AGREE ON A GENERAL SOUTH-WESTERLY TRACK BY THAT TIME. WITH THE ENSEMBLE MODELS, THERE IS STILL AN INCREASE IN THE UNCERTAINTY ON THE TRAJECTORY FROM MONDAY ONWARDS BUT THIS TENDS TO BE REDUCED COMPARED TO YESTERDAY.

THE OVERALL PHILOSOPHY OF THE INTENSITY FORECAST HAS NOT CHANGED: THE ENVIRONMENT OF DINGANI SHOULD PROGRESSIVELY IMPROVE IN THE NEXT 24 HOURS. INDEED, THE EAST-NORTHEASTERLY SHEAR, ESTIMATED AROUND 20 KT AT 21Z (CIMSS ANALYSIS), IS DECREASING. ON SUNDAY, THE UPPER LEVEL DIVERGENCE ON THE POLAR SIDE SHOULD ALSO STRENGTHEN. A GRADUAL AND FASTER INTENSIFICATION IS EXPECTED AND DINGANI COULD REACH THE STAGE OF TROPICAL CYCLONE DURING THE WEEKEND. ON SUNDAY, A NORTHWESTERLY MID-SHEAR SHEAR IS DEVELOPING AND COULD STRENGTHEN THE FOLLOWING

NIGHT, ACCOMPANIED BY DRY AIR INTRUSION. THESE HOSTILE AND LASTING ATMOSPHERIC CONDITIONS, ARE COUPLED WITH A DECREASING OCEANIC POTENTIAL. IN THIS UNFAVORABLE ENVIRONMENT, DINGANI SHOULD WEAKEN, POTENTIALLY QUITE QUICKLY.

ACCORDING TO THE CURRENT PREFERRED SCENARIO, DINGANI SHOULD PASS AT A SUFFICIENT DISTANCE FROM RODRIGUES NOT TO PRESENT A SIGNIFICANT THREAT.